TITLE: THE KELEMEN DILEMMA: CAUSAL COLLAPSE AND AXIOMATIC INSTABILITY

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1. ABSTRACT

The Kelemen Dilemma describes a terminal state-conflict within an axiomatically closed execution protocol. It demonstrates how a recursive command targeting the system's own cardinality leads to a violation of the ZF Axiom of Regularity (Axiom of Foundation), resulting in a causal collapse of the execution chain. This paper formalizes the instability of rule-bound omnipotence under retroactive modification.

2. FORMAL DEFINITION

Let S be a discrete execution system governed by a completion-axiom A1, such that:
C(S) = n, where n = 3 represents the mandatory number of executed operations.
Let W = {w1, w2, w3} be the set of fulfillment operations (wishes).
The system is required to process all elements of W to satisfy A1.

3. THE RECURSIVE COMMAND (w3)

The terminal operation w3 is defined as a retroactive state-modification:
w3 -> (n := 2)
This command targets the history of the execution protocol itself. By successfully processing w3, the system redefines its operational requirement from n = 3 to n = 2.

4. THE CAUSAL SINGULARITY (STATE-CONFLICT)

The dilemma arises from the procedural necessity of the execution-event:

•To initiate the processing of w3, the state |W| = 3 must be valid.

•The output of the processing of w3 is the retroactive state |W| = 2.

•This creates a logical contradiction: w3 is an element of W if and only if w3 is NOT an element of W.

5. VIOLATION OF ZF-REGULARITY

In Zermelo-Fraenkel set theory, the Axiom of Regularity (Foundation) prevents the existence of a set that contains itself in a circular or non-well-founded way. The Kelemen Dilemma forces the system into a non-well-founded state where an operation (w3) attempts to delete the very causal foundation required for its own execution.

6. CONCLUSION: SYSTEMIC COLLAPSE

The system faces two terminal paths:

A) Fulfillment: The system grants the request, thereby erasing the causal history that allowed the request to be processed (Causal Collapse).

B) Refusal: The system denies the request to maintain stability, thereby violating its core axiom A1 (Completeness Breach).

In both scenarios, the formal integrity of the system is destroyed.

Corresponding Research:

https://medium.com/@kelemen-dilemma/shagadelic-baby-how-to-crash-the-universe-with-boots-and-bell-bottoms-kelemen-dilemma-37e3741f3cee

https://en.wikiversity.org/wiki/The_Kelemen_Dilemma:_Causal_Collapse_and_Axiomatic_Instability